

REMARKS

Claims 2-9 are pending. Claims 2-5 and 8 have been amended for clarity. New claim 20 has been added. Support for claim 20 can be found throughout the specification and in the claims as filed. No new matter has been added.

Objections to the specification

The Examiner has objected to the incorporation by reference of Applicants' foreign priority application 10 2004 003 860.0. See Office Action at 3. Applicants have amended the priority claim as to not incorporate by reference foreign priority application 10 2004 003 860.0. Applicants request reconsideration and withdrawal of the objection.

The Examiner has objected to the disclosure for lack of brief description to the drawings and inclusion of embedded hyperlinks. See Office Action at 4. Applicants have amended the specification to include section headings, a brief description to the drawings and to remove the embedded hyperlinks. Applicants request reconsideration and withdrawal of the objection.

Objection to the drawings

The Examiner has objected to FIGS. 1-6, 18a-18b, and 19a-19c for containing dark backgrounds or areas of dark background that will render the content of the Figures difficult to see upon printing. See Office Action at 5. Applicants have amended the drawings to lighten the background and allow the Figures to be easily discernable upon printing. Replacement figures 1-21 are attached. Applicants request reconsideration and withdrawal of the objection.

Rejection under 35 USC § 112, second paragraph

The Examiner has rejected claims 2-9 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. See Office Action at 6. In an effort to expedite prosecution and not in acquiescence of the Examiner's rejection, Applicants have amended claim 2 to remove "preferably," "particularly preferably," "allowing specific hybridization with nucleic acid sequences of bacterial strains of the species *Pseudomonas aeruginosa*,"

“oligonucleotides hybridizing with a sequence, which is complementary to an oligonucleotide under i), ii) and iii) under stringent conditions.” Additionally, claim 3 has been amended to remove the limitation “having a shape and/or size typical for a laboratory reaction tube.” Claim 4 has been amended to remove the phrase “in each case.” Claim 5 has been amended to “a reference strain” rather than “the reference strain.” Support in the specification can be found at p. 11, lines 18-21: “In particular, the oligonucleotide probes of the nucleic acid chip according to the present invention are specific for nucleic acids having a base substitution in comparison with the sequence of the reference strain of *Pseudomonas aeruginosa*. The sequence of the genome of PAO1 strain, which is accessible via www.pseudomonas.com, is taken as reference.” Claim 8 has been amended to remove the word “like” and add the word “comprising.” Applicants request reconsideration and withdrawal of the rejection.

Rejection under 35 USC § 112, first paragraph

The Examiner has rejected claims 2-9 under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. See Office Action at 10. The Examiner contends that items ii) and iv) of claim 2 “each encompass a variety of different oligonucleotides meeting the structural and/or functional characteristics recited, and therefore each encompass a genus of different oligonucleotides that may be present on the claimed device.” See Office Action at 11. In an effort to expedite prosecution and not in acquiescence of the Examiner’s rejection, Applicants have amended claim 2 to remove items ii) and iv) from claim 2. Applicants request reconsideration and withdrawal of the rejection.

Rejection under 35 USC § 102(b)

The Examiner has rejected claims 2 and 4-9 under 35 USC § 102(b) as being anticipated by Wagner et al., *Journal of Bacteriology*, 185(7): 2080-2095 (Apr. 2003) as evidenced by the Affymetrix Data Sheet for GeneChip *Pseudomonas aeruginosa* (2003-2005) (“Wagner”). See Office Action at 15. Applicants respectfully disagree. Claim 2 is independent.

Claim 2 refers to a microarray device comprising a support element, on which oligonucleotide probes are immobilized on predetermined regions, for specifically detecting bacterial strains of the species *Pseudomonas aeruginosa*, wherein the oligonucleotide probes

are selected from the group consisting of i) the sequences listed and ii) oligonucleotides differing from one of the oligonucleotides under i) in that they are extended by at least one nucleotide. See claim 2.

Wagner describes global gene expression patterns modulated by QS regulons tested using high density oligonucleotide microarrays for *Pseudomonas aeruginosa* PAO1 genome. See Wagner *Abstract*. The Examiner contends that “the microarrays of Wagner et al could clearly be employed in ‘detecting bacterial strains of the species *P. aeruginosa*,’ and further include oligonucleotides meeting the broadly drawn requirements of item iv of claim 2.” See Office Action at 16. Wagner does not anticipate claim 2 as amended.

Accordingly, claim 2 and any claims that depend therefrom are not anticipated by Wagner as evidenced by Affymetrix. Applicants respectfully request reconsideration and withdrawal of the rejection.

Rejection under 35 USC § 103(a)

The Examiner has rejected claim 3 under 35 USC § 103(a) as being obvious over Wagner as evidenced by Affymetrix in view of WO 03/059519 to Schultz et al. (“Schultz”). See Office Action at 17. Applicants respectfully disagree. Claim 3 depends from independent claim 2.

As previously discussed, Wagner as evidenced by Affymetrix does not teach or suggest a microarray device of claim 2. Schultz does not supply these omissions. Schultz teaches a reaction vessel, a device and a method for the determination of specific interactions between molecular targets and probe molecules. See Schultz *Abstract*. Schultz does not teach, suggest, or motivate a person of ordinary skill in the art to make a microarray device of claim 2.

Accordingly, claim 2 and any claims that depend therefrom are patentable over Wagner as evidenced by Affymetrix in view of Schultz. Applicants respectfully request reconsideration and withdrawal of the rejection.

NEW CLAIM

New claim 20 depends from independent claim 2. Support for new claim 20 can be found in the claims as originally filed. Claim 20 includes the matter described by the Examiner as allowable subject matter. See Office Action at 20. Claim 20 relates to the device of claim 2, wherein the oligonucleotide probes are selected from the group consisting of

(all sequences in 5' → 3' direction):

GAAGCCCAGCAATTGCGTGTTTC (SEQ ID NO: 72)
 GAAGCCCAGCAACTGCGTGTTTC (SEQ ID NO: 73)
 GGTGCTGCAGGGTGTTTCGCCGG (SEQ ID NO: 76)
 GGTGCTGCAGGGCGTTTCGCCGG (SEQ ID NO: 77)
 CAAGATCGCCGCAGCGGTCAAC (SEQ ID NO: 78)
 CAAGATCGCCGCTGCGGTCAAC (SEQ ID NO: 79)
 TGCTGCTGGCGGCGGTGTGCTAT (SEQ ID NO: 80)
 TGCTGCTGGCAGCGGTGTGCTAT (SEQ ID NO: 81)
 CCTCGCCCTGTTCCCGCCGCTCTGG (SEQ ID NO: 84)
 CTCGCCCTGTTCCCGCCGCTCTGG (SEQ ID NO: 85)
 TCGAGCAACTGGCAGAGAAATCCG (SEQ ID NO: 86)
 CGAGCAACTGGCGGAGAAATCCG (SEQ ID NO: 87)
 GCGGAAAACCTCCTGCACATGATGTT (SEQ ID NO: 88)
 GCGGAAAACCTCCTCCACATGATGTT (SEQ ID NO: 89)
 AGCTCAGCAGACTGCTGACGAGG (SEQ ID NO: 90)
 AGCTCAGCAGACCGCTGACGAG (SEQ ID NO: 91)
 AAGAGGACGGCCGCCGGGTGACGCC (SEQ ID NO: 5)
 AAGAGGACGGCCGCCAGGTGACGCCG (SEQ ID NO: 6)
 GACAAGATGCGCCTCGACGACC (SEQ ID NO: 7)
 GACAAGATGCGTCTCGACGACCG (SEQ ID NO: 8)
 AGCCGACCTACGCGCCGGGCAG (SEQ ID NO: 9)
 CAGCCGACCTATGCGCCGGGCAG (SEQ ID NO: 10)
 CCGTTCGAACGGCTCATGGAGCA (SEQ ID NO: 11)

GCCGTTCTGAACGACTCATGGAGCA (SEQ ID NO: 12)
TGGAGCAGCAAGTGTTCCCGGC (SEQ ID NO: 13)
TGGAGCAGCAACTGTTCCCGGC (SEQ ID NO: 14)
GAACAAGACCGGTTCCACCAACGG (SEQ ID NO: 15)
AACAAAGACCGGCTCCACCAACGG (SEQ ID NO: 16)
GCGACCTGGGCCTGGTGATCCT (SEQ ID NO: 17)
GCGACCTGGGACTGGTGATCC (SEQ ID NO: 18)T
GCCGACCAACTGAACTCCAACCTCG (SEQ ID NO: 19)
GTCGCTGAACGGCACCTACTTCA (SEQ ID NO: 20)
CAGCCTGCGGTCATGTCCTCGG (SEQ ID NO: 21)
CGCCAGTTTGAGAACGGAGTCACC (SEQ ID NO: 22)
GCGCGATCTTCTCCACTTCATCGG (SEQ ID NO: 23)
GCCTCCGCGATTGAACATCGTGAT (SEQ ID NO: 24)
GTAGCCGGAGTCGAGCGGAATCAT (SEQ ID NO: 25)
GTGAGCATGGAATCGGCAGTCGTT (SEQ ID NO: 26)
CGAGGAGTTTCGGACCCGCTTTGA (SEQ ID NO: 27)
AATAGGACCGGCAGAACGGGCATT (SEQ ID NO: 28)
GCGCCTTCTCCTCTTTGCAGATGT (SEQ ID NO: 29)
CAGTATGGTACGGACACGAAGCGC (SEQ ID NO: 30)
GCATCATTGCGCGTCACATCTGGT (SEQ ID NO: 31)
TCTGAACTGCGGCTATCACCTGGA (SEQ ID NO: 32)
AATTGATGGCTTCTCAGGCGCAGG (SEQ ID NO: 33)
AGTCATGGGACTGAATACGGCGACT (SEQ ID NO: 34)
TTCTCGGTGTCGAGGGATTCTCGG (SEQ ID NO: 35)
TGGTAGCTCTCGACGTACTGGCTG (SEQ ID NO: 36)
CCCGTTGCTCATAACCCGTTCCCTG (SEQ ID NO: 37)
AGGGCATTCTCAGGTGGACTCAGG (SEQ ID NO: 38)
ACCTGTGTCGCTGGAGGGTATGTT (SEQ ID NO: 39)
AGCGTCCCTGACCAACCTCATCAG (SEQ ID NO: 40)
CGCCAACAATTCGCCATTACAGCG (SEQ ID NO: 41)

TCCAACAGGCAGGAGTACAGGGTG (SEQ ID NO: 42)
CGCTGCACATACAGGTCCGTTCTC (SEQ ID NO: 43)
AGCCCAGCAATTGCGTGTTTCTCCG (SEQ ID NO: 44)
AGCCCAGCAACTGCGTGTTTCTCC (SEQ ID NO: 45)
GCTGCTGGCGGCGGTGTGC (SEQ ID NO: 46)
TGCTGCTGGCAGCGGTGTGCT (SEQ ID NO: 47)
CAGAAAGCTCAGCAGACTGCTGACGAG (SEQ ID NO: 48)
GAAAGCTCAGCAGACCGCTGACGAG (SEQ ID NO: 49)
ACGGCCGCCGGGTGACGCC (SEQ ID NO: 50)
ACGGCCGCCAGGTGACGCCG (SEQ ID NO: 51)
GCCGACCTACGCGCCGGGC (SEQ ID NO: 52)
AGCCGACCTATGCGCCGGGCA (SEQ ID NO: 53)
GTTCTGAACGGCTCATGGAGCAGCA (SEQ ID NO: 54)
GTTCTGAACGACTCATGGAGCAGCAAG (SEQ ID NO: 55)
CAGCCCAGTCAGGACGCGCA (SEQ ID NO: 56)
AGTGACGTGCGTTTCAGCAGTCCC (SEQ ID NO: 57)
GTGTCACGGCCCATGTCTAGCAGC (SEQ ID NO: 58)
CGAAGTCTGAGGTGTGGACCCGC (SEQ ID NO: 59)
CGCTGGAGGGTATGTTCCGCAAGG (SEQ ID NO: 60)
CGTACTCAGCTTCTCCACCCAGCG (SEQ ID NO: 61)
CCTGGACCTCTCCAAGGTTGCCT (SEQ ID NO: 62)
GCCATTCCGACGACCAAACAAGGC (SEQ ID NO: 63).

None of the cited references describe, teach or suggest the features of claim 20. Accordingly, claim 20 is patentable over the cited references.


CONCLUSION

For the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the pending rejections. Applicants believe that the claims now pending are in condition for allowance.

The Commissioner is authorized to charge Deposit Account 19-4293 should any fees be required by the present amendment.

Respectfully submitted,

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